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28 December 1961

MEMORANDUM FOR: Chief, Technical Intelligence Division

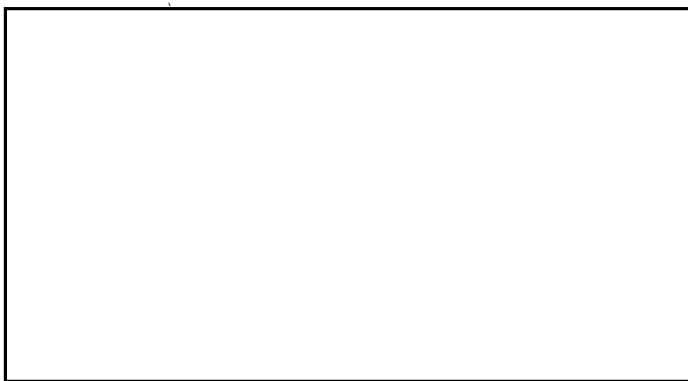
FROM: Chief, TID/TAB

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SUBJECT: Trip Report on Visit

11 - 20 Dec 61

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2. During the period 11-15 December [redacted] devoted his entire time to the electronic wiring and coupling of the [redacted] circuitry with that of the [redacted] accumulators and periphery equipment. No. serious difficulties were encountered with the exception of the check channel cards and these could have been corrected if [redacted] had the proper test facilities. (see enclosure for more detailed, day by day chronology.)

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3. [redacted] recommended that at least one circuit card of each type used in the [redacted] equipment should be held as a spare. When many cards of the same type are used, that the quantity held as spares should be approximately [redacted] of the total. Enclosed is a list of recommended spare parts. A contract for the initial spare parts should be negotiated as soon as possible [redacted] also added [redacted] guarantees the replacement of any circuit and failure for one year.

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4. A maintenance contract should be negotiated [redacted] to maintain [redacted] and a separate contract [redacted] to maintain the electronic aspects of the instrument [redacted] has been asked to submit a biographic sketch of [redacted] representatives who will be installing their equipment [redacted] has been informed of this action.

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5. [redacted] suggested that we send an electronic technician to [redacted] for a one or two week course in [redacted] circuitry.

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6. The mechanical-optical checkout [] was highly successful. Some modifications were suggested but none that would involve any major redesign, or additional expense.

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7. The orienting coordinator attachment [] has been deferred until some experience has been gained [] also to determine whether or not the attachment will have practical production application.

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STATINTL 8. A proposal for glass grids to enable terrain analysis will be forthcoming [] had not had time to consider the design. He anticipated no problems but had not been able to get around to it.

9. The agreed delivery schedule is as follows:

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1. Instrument No. 1 and No. 2 will be crated and at [] Airport on 15 February 1962.

a. Electronic Unit for instrument No. 2 will leave [] on 23 January 1962. [] should be completed with instrument No. 1 and No. 2 on 7 Feb 62.

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2. Instrument No. 3 will be crated and at [] on 15 March 1962.

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a. Electronic unit No. 3 will leave [] on 27 Feb 62. [] should be completed with No. 3 by 10 March 62.

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10. It was agreed that boxes should be identified as follows:

- A - Instrument No. 1
- B - Instrument No. 2
- C - Instrument No. 3

Example: A 3/15 means Instrument No. 1, box 3 of 15.

11. Enclosed are the following:

- A - Summary of electronic aspects
- B - Spare parts
- C - Manuals on [] equipment
(Manuals to be returned to TID/TAB)

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Distribution:

- 1 - Chief, TID
- 1 - Chief, TP&DS
- 1 - Chief, Admin
- 1 - APPROVAL Files

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ENCLOSURE A

SUMMARY OF ELECTRONIC ASPECTS ENCOUNTERED DURING THE PERIOD

11 December -- 15 December

Monday 11 December:

Unpacking circuit cards and assembly in chassis.

Connection of main leads.

Photocell cables in [] duct unscreened and running with power leads.
Arrangements made for screened cables to be fitted.

25-way and 2-way cable connecting [] Selector Unit to [] machine
required to be distributed between the 4 [] type connectors.

This work was initiated.

Mechanical assembly of tape punch completed.

Tuesday 12 December:

X1 grating and reading heads mounted trimmed up and signals obtained
on CRT.

It was not possible at this stage to make the Counters operate because
the remote zero setting control on the [] machine was open circuit
without the cable which was still unconstructed.

The operation of the tape punch and the typewriter were checked and
found to be OK.

Suppression was recommended for the [] and Contractors on the
[] Equipment using diodes and condensers. Components for this purpose
had to be obtained from suppliers []

Wednesday 13 December:

Y1 grating and reading heads were fitted and a signal obtained on the CRT.

The 4-way connector cable was completed and attached to the [] machine
The X1 and Y1 counters were not live, and X2 and Y2 Zero set connections
were open circuit. Wiring fault was tracked down and rectified.

All the four counters were not live and the X1 and Y1 reading heads were
connected to the X2 and Y2 counters and the operation of these checked.

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The reading head cables were not changed to route the signals through the ☐ conduit using the ☐ connectors.

Thursday 14 December:

All the four counters were checked. The counter and store channels were OK, except for one faulty decade card which was replaced with a temporary spare.

The check channels were showing up spurious faults.

Checking showed some defective cards. It was not possible to rectify these with the test facilities available ☐ It was, therefore, decided to ship back all the checking channels cards ☐ for retest.

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This would not affect the operation of the main counter and printout channels and would enable calibration tests to proceed.

Friday 15 December:

X2 and Y2 gratings and reading heads were mounted and signals set up.

The printout refused to initiate.

This was found to be due to intermittent contacts in the ☐ six decade switch. When this made contact the printout functioned OK.

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Occasional failure of ☐ typewriter to provide a feedback signal was due to compression of internal wiring operating the solenoids.

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These were re-adjusted and the fault cleared.

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The suppression of the motor contractors on the ☐ machine was completed and it appeared to be satisfactory.

All the four counters were checked for return to datum and found to be OK.

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ENCLOSURE B

Spare Parts

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In enclosed [] manual titled: Part 2, "The Basic Counter" section 7, table I, there is a list of recommended spare parts. In addition to this list [] recommended the following:

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<u>Item</u>	<u>Quantity</u>	<u>Description</u>
1	2	Decade circuit boards
2	2	Storage circuit boards
3	2	Decimal to ternary converter circuit board
4	1	Input circuit board
5	1	Storage pulse generator circuit board
6	1	Pentade circuit board
7	1	Ternary compensator circuit board
8	1	Ternary check circuit board
9	1	Input check circuit board
10	1	Photo cell package circuit board

STATINTL [] dictated the above list from memory so there may be some slight modification.

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